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**NAO Answers Seven Key Questions
About the
Innovation & Productivity Tax Credit**

Jim Fletcher, Co-Chair NAO Public Policy
Bruce Gitelman, Co-Chair NAO Public Policy
info@angelinvestor.ca
416-581-0009

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NAO Answers Seven Key Questions About the Innovation & Productivity Tax Credit

The National Angel Organization⁽¹⁾ is a national group dedicated to promoting best practices and advocacy for angel investors. We look forward to being a resource for policy makers looking for insight into individual investors. If you need any additional information regarding individual investors please do not hesitate to contact the NAO Public Policy Co-Chair Bruce Gitelman at 416 398 1339.

The NAO has undertaken advocacy because of the poor state of angel investment in Canada. The Global Entrepreneurship Monitor (GEM) Canada 2002⁽²⁾ study revealed that the USA has 53% more angel investors per capita than Canada (3.2% vs. 4.9%). The studies authors found this surprising given the fact that Canada fared well in every other indicator of entrepreneurial activity. The lack of individual investors is a critical bottleneck in Canada's commercialization strategy.

During our recent visit to policy makers in Ottawa we put forth a recommendation made by the NAO and the Canadian Task Force on Early Stage Funding called the Innovation and Productivity Tax Credit (IPTC). A program based on the successful 10 year old UK EIS program and similar programs in B.C. and some US states.

A number of common questions arose:

1. Will the IPTC create net new investment in seed and early stage companies?
2. How expensive will the program be and will it spin out of control?
3. Why do we need the IPTC when we already have existing programs?
4. What is the potential for abuse?
5. Will the IPTC attract investors who will help grow these companies?
6. Won't increased funding to BDC solve the funding gap?
7. Won't the IPTC distort the efficiency of the capital markets?

We have put the answers to these questions together below for your information:

1. Incrementality or Additionality

Q: How do we know that the IPTC does not simply provide tax refunds to investors that would have made these investments anyway?

A: The UK Enterprise Investment Scheme has been in place for 10 years and a review of the scheme⁽³⁾ has concluded that between 87% and 52% of the financing provided would not have happened in the absence of the tax incentives. Based on a 50/50 federal/provincial split of an IPTC, the federal government could generate \$1 billion



of investment with only a \$150 million tax credit⁽⁴⁾. Based on the UK study the \$150 million federal tax credit could generate from \$870 million to \$520 million in net new investment annually.

Incentive programs can never achieve absolutely perfect targeting. RESP's, RRSP's and in-store rebates all benefit certain people that would get their children through university, retire in comfort or purchase an electronic product anyway. But the high-risk profile of early-stage investing makes it a certainty that for many companies and investors, the IPTC will be the tipping factor that enables "seed round" investment. In other words, the IPTC moves the dividing line between fundable and unfundable significantly in favour of the companies seeking funding.

For companies that may have been funded without the program, the IPTC represents additional capital leverage. For example, if 5 investors were prepared to invest \$350,000 in total, they could invest \$500,000 at the same after-tax cost, thereby increasing the likelihood of success of the business. In other cases, the IPTC will alter the relative equity sharing ratios between the entrepreneurs and the investors in favour of the entrepreneurs, again enhancing the long-term success of the business via entrepreneurs feeling that they have been treated more fairly. Simply put, the entrepreneurs do not give up control of their operations, and benefit from individuals that offer the invaluable "human capital" needed to commercialize innovation.

In Canada, individual investors report that one of the greatest inhibitors to investment is unrealistic expectations and valuations of entrepreneurs⁽⁸⁾. The NAO believes that the IPTC, by enhancing the risk/reward relationship, lessen these inhibitors and enables funding.

2. Cost Containment

Q. How do we know that the IPTC program will not run out of control and cost more than expected?

A. To understand the speed of program uptake it is informative to look at other jurisdictions. A survey of US programs found that nearly half of states with direct tax credit programs experienced shortfalls between their anticipated and actual tax credit disbursements⁽⁵⁾. The UK program has been in place for 10 years and it showed a steady but growing program each year. In the UK where the economy is 70% larger than Canada⁽⁶⁾ it took six years for the program to generate over 500 million pounds of private investment⁽³⁾. If the IPTC in Canada achieved \$500 million in private investment it would only cost the federal government \$75 million based on a 50% share of a 30% tax credit. The majority of the \$500 million in private investment would be incremental new investment based on the UK study results. To put these numbers in perspective the



venture capital community in Canada only invested \$30 million in seed funding and \$170 million in early stage investment last year.

If there is a concern about the program getting out of control there are two additional steps that can be used to limit the rate of growth: program caps and targeted marketing

Program Caps

The British Columbia government budgets each year a total figure for the program. As companies apply to become eligible they are allocated a portion of the budget for a set time period. During the allowed time period if the eligible company finds investors then those investors are entitled to claim the tax credit after they make their investment. If the company does not find investors within the time frame then the allocated tax credits are returned to the province. All registered companies have the opportunity to reapply for subsequent capital allocations, however the amount provided will depend on factors such as their ability to raise program capital in the past, the stage of the business cycle and if they have capital ready for investment.

Targeted Marketing

The B.C. program has limited marketing dollars so virtually all of the program marketing has been narrowly targeted at the most desirable individual investors. Typically presentations are made at angel investor functions, technology association meetings, and joint presentations made with federal counterparts delivering programs such as IRAP to small businesses seeking to commercialize their technologies. By limiting the scope of advertising and marketing the program uptake has been very manageable and requires little administrative overhead.

3. Other Tax Incentives

Q: We have in place a capital gains deferral mechanism, and capital gains exemptions for investments in private companies. Why don't these provide the necessary incentives?

A: The capital gains exemption is a nice "bonus" when gains occur, but has very little incentive power in the early days, when investors are much more concerned with capital risk than with after-tax returns. The capital gains deferral is a more powerful incentive because it does operate at the front-end of the next investment. However, it suffers from the simple fact that at any moment in time, it is only applicable to a very small subset of the population of potential investors in a new business, and so has limited usefulness. The struggling entrepreneur has enough difficulty identifying



investor prospects with assets and interest, without the added burden of screening for the small sub-segment that has recently achieved investment success and so has deferrable gains.

Tax credits are a better use of tax dollars because they generate more investment per tax dollar than capital gains exemptions. This is because small tax credits are a much bigger incentive to investment than larger capital gains tax savings due to the tendency of people to discount expected outcomes proportionate to their delay. This violation of rationality in human decision making is well documented. The dominant theory in the behavioral sciences has been that normal people discount the option of a delayed reward according to an exponential curve that is by a constant percentage per unit time. This exponential curve is similar to that used by financial markets: $\text{current value} = \text{nondelayed value} \div (1 + \text{discount rate})^{\text{delay}} (7)$.

It is because of the relative value of immediate vs. delayed monetary rewards that dollar per dollar the maximum incentive comes from a certain and quick tax credit that is expected in less than a year. People discount heavily or don't even consider the savings created by a reduction in capital gains tax payable in the much longer term 5 to 15 years out.

Tax credits have another advantage over capital gains incentives. One of the large impediments to investment is the natural human fear of loss. It is a well known fact that most investors will choose a much lower rate of return if they are promised no loss of capital versus an investment with a dramatically higher rate of return but a chance of loss of capital. A capital gains incentive only comes into play if the investment is successful. Most seed and early stage investors are much more concerned about the possibility of a total loss of the investment. A 30% tax credit assures the investor that there will not be total loss and they will be more likely to make the investment. This has been shown to work in Canadian tax policy by the willingness of average tax payers to invest in venture capital when Labour Sponsored Funds promise tax credits.

Thus the most efficient use of the government's money is for short term incentives rather than long term incentives, as they provide the greatest motivation for the lowest cost.



4. Abuses

Q: How do we prevent abuses?

A: At the 70:30 risk-sharing ratio between equity investors and government, the payoff for abuse is limited. The BC model of pre-approving business plans and then having the right to conduct follow-up audits provides additional comfort. The audits conducted in BC to date have revealed very little program capital abuse. In situations of extreme program abuse, the BC legislation has tax credit collection mechanisms that are administered by its Ministry of Provincial Revenue and enforced by the Canada Revenue Agency by agreement. These controls ensure that program credibility is maintained. The fact that the UK EIS program has been in effect for 10 years shows that the abuses have not been significant.

The SRTC program of the early 1980's was a program that was abused; how is the IPTC different? The SRTC Program pre-sold tax credits, and then left it to the companies to find the private equity to complete the research, which generally never materialized. The IPTC follows the investment by the private sector; individuals invest \$1.00, and subsequently recover \$0.30. In British Columbia, routine audits by CA firms are conducted between the period of investment and the issuance of tax credits to confirm that no abuses are occurring. The IPTC is based on the same good thinking that has gone into the successful SREDS tax credit program that also relies on the taxpayers first putting up the investment and then only receiving a portion as a tax credit.

5. Making Seed and Early Stage Companies Smarter

Q. The tax credit will make investments cheaper but will it make investors smarter?

A. A well designed IPTC will make seed and early stage investments more affordable for individual investors by tilting the risk/reward ratio in favour of investment. Although the program itself will not make investors smarter it will help attract badly needed individual investors with a lot of business I.Q. Angel investors with business experience can be invaluable in improving the chances of success for seed and early stage companies by making them smarter.

It is important to design the program with just enough tax credit to tilt the risk/reward ratio without unduly distorting the risk/reward ratio. Too high a tax credit will attract causal unsophisticated investors with less business IQ. Tax credit programs in Canada, USA and UK typically fall in the 20 to 40% range to prevent distorting the risk/reward ratio.



The UK EIS evaluation study⁽³⁾ looked into what extent the schemes provided benefits over and above the supply of finance. Nearly half of the EIS companies indicated that using the scheme enabled them to attract investors who also provided them with business advice and expertise. This extra support was generally described as extremely or very helpful.

In a study conducted for Industry Canada, SME⁽⁸⁾ owners in the Ottawa region cited six other ways in which informal investors contributed to their growth and success. The study found that the two most common non-financial contributions of individual investors were advice and introductions to contacts and networks. Individual investors use their business knowledge and experience to assist owners with corporate and strategic planning, marketing, and managerial and general business guidance. Individual investors also sometimes sit on the boards of directors, providing industry information and lending credibility, particularly with respect to future financing

The IPTC can be targeted to attract more individual investors with high business IQ. The B.C. program has limited marketing dollars so virtually all of the program marketing has been narrowly targeted at sophisticated investors. Typically presentations are made at angel investor functions, technology association meetings, and joint presentations made with federal counterparts delivering programs such as IRAP to small businesses seeking to commercialize their technologies.

The B.C. experience has also shown the value of attracting individual investors. The following excerpt from a case study explains how an individual can add value to a company:

“Delta-Q has a strong interest in attracting investors who get involved as founders, operators or executives and who have a prior track record in high growth, high tech companies. For instance, a recent investor that came in under the Venture Capital Program took an active role as our financial controller. This individual is now preparing financial statements, processing financial transactions, planning, and scheduling production activities through our manufacturing sub-contractor. The investor participates as a member on the company’s PRB (Program Review Board) and is also leading an ERP system implementation to accommodate the growth needs of the company. He also attends monthly board meetings and makes presentations on our financial information. The company has obviously benefited as we get an experienced operational executive whose insights and knowledge is helping the company’s prosperity.”



6. Supplanting BDC and other existing venture capital funds

Q. Won't providing additional funds to BDC solve the funding gap?

A. Entrepreneurs and early-stage ventures are highly diverse and scattered across the country. Only the tens of thousands of individual investors can give the coverage and reach, coast-to-coast and north-to-south, to adequately address the gap. In addition, most individual seed deals are less than \$500,000 in size, and no professional VC manager can look after more than 5-10 investments, depending on their stage (fewer at the early stages). For BDC and other VC's to invest an additional \$500 million in early-stage companies would require well over 100 new managers, with annual salary and other costs of over \$20 million. Individual investors provide these services at no cost. The NAO believes that there are many other structural impediments that prevent funds such as V.C.'s and the BDC from funding seed and early stage companies a more detailed description of these impediments can be found in reference (4)

7. Capital Markets & the "Ecosystem"

Q. Won't the IPTC distort the efficiency of the capital markets?

A. The NAO believes that an IPTC will increase the efficiency of the seed and early stage capital markets. Although Canada enjoys a large and highly efficient capital market for large companies the same cannot be said of the capital markets for seed and early stage companies. The seed and early stage capital markets are small, inefficient, imperfect and far from transparent. Government intervention is required in order to carry out economic growth policies. There are a number of reasons why these markets are inefficient. The average size of deals in Canada is smaller than then in the USA and yet the costs associated with investment are almost the same in both markets. In Canada entrepreneurs have a substantially lower number of banks they can approach than in the USA. Canada also suffers from large geographic distances between investors and companies. Clusters tend to be spread out and the matching up of individual investors with companies is more difficult. With Canada having 56% fewer angel investors per capita than the USA⁽²⁾ it is much harder for companies to find and pitch individual investors. The high scarcity value of individual investors in Canada has distorted the market and made it harder and more expensive if not impossible in some situations to raise seed and early stage funding. An IPTC helps to correct this market distortion.

Seed financing is the next step after R&D. Current public funding of R&D in Canada is over \$9 billion annually. The IPTC is a logical and necessary step in the continuum from pure research that is 100% publicly funded to more mature companies that are financed 100% privately. The dividing line between public and private cannot be precisely



defined; the IPTC bridges the middle ground by requiring private funding, while supporting it.

A 30% IPTC would also help defray the higher risks and costs of early-stage investing – and attract more equity capital into more ventures. In addition, the increased creation of venture capital ready companies would improve the “deal flow” for VC funds, LSIFs, BDC, and commercial banks, enabling them to be more selective and improve their rates of return, which will attract greater funding to the more senior parts of the funding “ecosystem”. The IPTC is one initiative that can be embraced by most participants in the capital markets ecosystems including diverse special interest groups looking for specific sector incentives. Improving rates of return could ultimately obviate the need for tax credits as a motivator at the LSIF level, which would constitute another large return to government on the IPTC investment.

A major problem in the capital markets funding ecosystem is that VC returns are low. Venture capital returns are low because there is a lack of venture capital ready companies to invest in. Any initiative to increase venture capital financing must deal with the fundamental shortage of venture capital ready companies. The IPTC is one way to increase the number of venture capital ready companies.

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